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10/769,907	02/03/2004	Shunpei Yamazaki	07977-302002	9780

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EXAMINER

TRAN, BINH X

ART UNIT	PAPER NUMBER
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1792

NOTIFICATION DATE	DELIVERY MODE
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04/14/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PATDOCTC@fr.com

Office Action Summary	Application No. 10/769,907	Applicant(s) YAMAZAKI ET AL.	
	Examiner Binh X. Tran	Art Unit 1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 December 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 22,25 and 28-55 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 28-51 is/are allowed.
- 6) ☒ Claim(s) 22,25 and 52-55 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 10/072,310.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2/19/2008; 12/12/2008</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 22, 25, 52-55 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. The step of forming a film in the chamber is critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). In the preamble of claims 22 and 25, applicants recite "A film forming method in a film formation chamber comprising the step of". However, applicants fail to disclose any film forming step in the body of the claim. The examiner clearly recognizes that applicants recite the step of activating the first organic compound and second organic compound in the chamber. However, applicants did not recite that the activated first and second organic compounds form a film in chamber. It is possible to that the first organic compound and second organic compound are activated inside a chamber without forming any film (i.e. the activated first compound and second organic compound are removed from the chamber by the first and second exhaust means without forming any film).

Claims 52-55 are rejected under 35 U.S.C. 112, first paragraph because they depend on rejected claims 22 or 25.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 22, 52, 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishihara et al. (US 4,717,585) in view of Ichikawa (US 6,022,458).

Respect to claim 22, Ishihara discloses a method comprising:

simultaneously operating first evaporating means and second evaporation means (i.e. gas source with suitable gasifiers) in the film formation chamber (Fig 3, fig 4, col. 13 lines 45-67 to col. 14 lines 52; col. 26 lines 35 to col. 27 line17; Table 2A, Table 2C, Table 3C, Table 1E, Table 2F, etc);

activating a first organic compound evaporated using the first evaporating mans and a second organic compound using the second evaporation means by irradiating the

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first organic compound and the second organic compound with light (col. 8 lines 62-68, col. 11 lines 60 to col. 12 line 3);

wherein the film formation chamber is connected with exhaust means (col. 14 lines 18-25; col. 26 lines 41-50, col. 28 lines 50-60).

Ishihara fails to disclose the inner wall of the film formation chamber is electrolytic polish or a second exhaust means. Ichikawa teaches the chamber surface is subjected to electrolytic polish in order enhance to coating process and prevent impurities (col. 7 lines 51 to col. 8 line 13). Ichikawa further disclose a chamber has two exhaust means (26, 27) (See col. 7 lines 40-50, col. 7 lines 60 to col. 8 lines 5). It would have been obvious to one having ordinary skill in the art, at the time of invention, to modify Ishihara in view of Ichikawa by electrolytic polishing the surface of the chamber because it will enhance the coating process and prevent impurities. It would have been obvious to one having ordinary skill in the art, at the time of invention, to modify Ishihara in view of Ichikawa by using two exhaust means because they can act as an auxiliary pump to control the vacuum pressure of the chamber.

Respect to claim 52, Ishihara disclose the first organic compound and the second organic compound are different from each other (Fig 3-4). Respect to claim 54, Ishihara disclose the light is infrared light (aka IR; See col. 8 lines 63-68).

6. Claims 25, 53, 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishihara et al. (US 4,717,585) in view of Ichikawa (US 6,022,458) and further in view of Goldman et al. (US 5,039,657) and Ohmi et al. (US 6,215,806) .

Respect to claim 25, Ishihara discloses a method comprising:

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simultaneously operating first evaporating means and second evaporation means (i.e. gas source with suitable gasifiers) in the film formation chamber (Fig 3, fig 4,col. 13 lines 45-67 to col. 14 lines 52; col. 26 lines 35 to col. 27 line17; Table 2A, Table 2C, Table 3C, Table 1E, Table 2F, etc);

activating a first organic compound evaporated using the first evaporating mans and a second organic compound using the second evaporation means by irradiating the first organic compound and the second organic compound with light (col. 8 lines 62-68, col. 11 lines 60 to col. 12 line 3);

wherein the film formation chamber is connected with exhaust means (col. 14 lines 18-25; col. 26 lines 41-50, col. 28 lines 50-60).

Ishihara fails to disclose the inner wall of the film formation chamber is electrolytic polish or a chamber is connected with a cryopump and a dry pump. Ichikawa teaches the chamber surface is subjected to electrolytic polish in order enhance to coating process and prevent impurities (col. 7 lines 51 to col. 8 line 13). Ichikawa further disclose a chamber has two exhaust means (26, 27) includes a dry pump (27) (See col. 7 lines 40-50, col. 7 lines 60 to col. 8 lines 5). It would have been obvious to one having ordinary skill in the art, at the time of invention, to modify Ishihara in view of Ichikawa by electrolytic polishing the surface of the chamber because it will enhance the coating process and prevent impurities.

Goldman teaches to use two different pumps include a cryopump and a dry pump (Fig 1). It would have been obvious to one having ordinary skill in the art, at the

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time of invention, to modify Ishihara and Ichikawa in view of Goldman by using a cryopump because it provides a high speed vacuum power for the chamber.

Ishihara, Ichikawa and Goldman differ from claim 25 by further disclosing the average surface roughness of the inner wall is 5 nm or less. However, Ichikawa clearly discloses the roughness of less than 0.1 μm (col. 7 lines 55-60). Ohmi teaches to electro-polish a metal surface to have a roughness of less than 0.1 μm , preferable less than 0.01 μm in order to improve corrosion resistance, including a roughness of 5 nm (col. 2 lines 25-30, col. 4 lines 18-30, col. 7 lines 55-60, col. 9 line 50-54). It would have been obvious to one having ordinary skill in the art, at the time of invention, to select a proper roughness value because it has been held that there is no invention where the difference is not critical and was ascertained by routine experiment because determination of workable ranges is not considered inventive. Further, Ohmi clearly teaches to reduce surface roughness because it will improve corrosion resistance (col. 7 lines 55-60).

Respect to claim 53, Ishihara discloses the first organic compound and the second organic compound are different from each other (Fig 3-4). Respect to claim 55, Ishihara discloses the light is infrared light (aka IR; See col. 8 lines 63-68).

Allowable Subject Matter

7. Claims 28-51 are allowed.
8. The following is a statement of reasons for the indication of allowable subject matter: The reason for allowance was discussed in previous office action.

Response to Arguments

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9. The examiner has considered all references in the IDS filed on February 19, 2008 and supplemental IDS filed on 12/12/2008 (Please see attachment).

The applicant's amendment filed on 12/12/2008 along with the remark in pages 10 is sufficient to overcome the examiner previous ground of rejection under 35 USC 112, 2nd paragraph.

Applicant's arguments with respect to claim 22, 25 have been considered but are moot in view of the new ground(s) of rejection. Specifically, the applicants state that "Goldman does not describe or suggest activating the evaporation sources by irradiating the evaporation sources with light and, as such, does not describe or suggest activating a first organic compound evaporated using the first evaporation means and a second organic compound evaporated using the second evaporation means by irradiating the first organic compound and the second organic compound with light, as recited in amended independent claims 22 and 25". This argument is moot in view of new ground of rejection base on the new cited prior art (Ishihara et al).

The examiner also provides a new ground of rejection 35 USC 112, first paragraph with respect to the amended claims as discuss above.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Binh X. Tran whose telephone number is (571)272-1469. The examiner can normally be reached on Monday-Thursday and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nadine Norton can be reached on (571) 272-1465. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

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USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Binh X Tran
Primary Examiner
Art Unit 1792

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